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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,557	03/29/2005	Yoav Kapah	26695U	7936

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NATH & ASSOCIATES
112 South West Street
Alexandria, VA 22314

EXAMINER

SALVATORE, LYNDA

ART UNIT PAPER NUMBER

1771

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/529,557

Applicant(s)

KAPAH, YOAV

Examiner

Lynda M. Salvatore

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-12 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/27/05

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 13 is objected to because of the following informalities: Claim 13 is grammatically awkward (e.g., method for production of shell for). Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claims 3 and 4 are indefinite because it is not clear to the Examiner what is meant by “part of said fabric layers” have an areal density less than 160 g/m^2 and the rest fabric layers have areal density between $200\text{-}160 \text{ g/m}^2$. It is not clear what constitutes “part” of said fabric layers and “rest” of fabric layers. Additionally, claims 3 and 4 are grammatically awkward (e.g., and the rest fabric layers). For purposes of examination said limitation will be interpreted to mean that the fabric layers have an areal density of less than 160 g/m^2 .

5. Claim 4 is further indefinite because it contains the trademark/trade name KEVLAR-KM2®. Where a trademark is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is

Art Unit: 1771

uncertain since the trademark name cannot be used to properly identify any particular material or product. A trademark is used to identify a source of goods, and not the goods themselves. Thus, a trademark does not identify or describe the goods associated with the trademark. In the present case, the trademark is used to identify the type of paraaramide and, accordingly, the identification description is indefinite.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 9-10 and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Li et al., US 4,916,000.

The patent issued to Li et al., teach ballistic composite material comprising 164 fabric layers comprising aramid fibers and resin matrix (column 18, 40-45, column 10, 35-50 and column 6, 5-10). With regard to the thickness limitations, Li et al., teach a composite comprising thirty layers each having a thickness of .02cm (.2mm)(column 19, 15-36). Thus, Li et al., inherently meets the total thickness limitations presently set forth. With regard to the areal density limitations, Li et al., teach composite panel with an areal density of 6.02 kg/m² (column 19, 40-45). With regard to the pressure bonding limitations, Li et al., teach a pressure up to 69,000 kpa (703 kg/cm²) (column 11, 1-21). Li et al., teach that the composite is suitable for use in helmet applications (column 16, 63-69).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-8 and 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al., US 4,916,000 in view of Bottger et al., WO 00/42246.

See the above rejection with respect to the Li et al., reference. With specific regard to claim 5, Li et al., teach coating the fabrics with resin matrix in an amount ranging from 1% to 150% (column 10, 40-55 and column 11, 20-column 12, 15).

Li et al., does not teach the areal density of the individual fabric layers, however, the published patent application issued to Bottger et al., teach ballistic grade fabrics comprising paraamide fibers having an areal density of 100 g/m² (page 2, 29 and page 5, 10).

Since each individual layer contributes to the overall weight and thickness of the final shell composite, it is the position of the Examiner that it would be obvious to one having ordinary skill in the art at the time the invention was made to form the individual layers in the ballistic composite of Li et al., with fabrics having desirable areal densities as taught by Bottger et al.

Art Unit: 1771

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynda M. Salvatore whose telephone number is 571-272-1482.

The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

January 5, 2007

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